

10/5/04, 187

Appl. No. Not Yet Assigned
Amdt. Dated March 31, 2006
Preliminary Amendment

of sufficient mass, the temperature decay will be minimal for periods of several tens of minutes as the wafer is loaded for the process stage.--

Please replace the paragraph beginning at page 12, line 14, with the following rewritten paragraph:

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3/25/10

-- It should be noted that at low ICP Power there might be insufficient heating to maintain a suitable temperature. We envisage the lighter material unit to be used in this instance. In this case, the unit is preferably, in one embodiment, designed and implemented with a poor thermal contact to the temperature-controlled object (chamber). Temperature rise would be rapid until it came into equilibrium with radiative and convective heat loss mechanisms. For such a unit running at high power, and for a more robust unit running at very high power, it is preferable that the guide incorporate additional cooling, which might take the form of a cooling fluid flowing in grooves machined into the under-side of the guide, fluid passages or channels, or fluid-containing pipes attached to the non-plasma facing surface of the guide by either welding or some form of compression device.--

Please replace the paragraph beginning at page 15, line 25, with the following rewritten paragraph:

-- Uniformity of process is an important issue to be addressed. For a substrate wafer of a diameter larger than the throat of the guide it is possible for the neutral density to drop as a result of the expansion of process gases downstream of the guide throat. As the material flows down through the guide from the plasma source it is compressed during its transit through the gap between the guide throat and the table. Once past this point the material expands as both radius increases and in the axial direction away from the table surface. This is illustrated at 71 in Figure 5. There is an associated reduction in the density of reactive material in contact with the edge of a wafer located at a radius greater than that of the throat, which produces non-uniformity in the